

From Ice to Music:

The challenges of translating the sights and sounds of Antarctica into music

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In January 2004 I journeyed to Antarctica as an Antarctica New Zealand Honorary Artist Fellow. My proposed study was entitled *Sounds of Antarctica* and entailed producing a portfolio of original compositions. The attraction of the planet's last great wilderness for me was to a large degree the challenge of how one translates such a limited visual palette into sound. In this paper I will explore how an environment of sensory deprivation can influence and shape one's work and how a creative artist can find a productive solution to the issue of transcribing such diverse elements as landscape, history, colour (or absence thereof) and natural phenomena (such as wind) into a satisfying musical and poetic form. I conclude that through the study of this distant, frozen, inhospitable land, my creativity has paradoxically moved into a very fertile stage. It was not, as I first thought, the wide, majestic vistas that later fuelled my compositions but the play of light and the effects of a limited colour palette. Nevertheless, it is perhaps because of the wide horizons that I have been thinking horizontally in a linear fashion rather than vertically. The vastness of the panorama is also the reason for focusing on the small details close at hand.

In January 2004 I journeyed to Antarctica as part of Antarctica New Zealand's education programme as an Honorary Antarctic Arts Fellow.¹ My proposed study was entitled *Sounds of Antarctica* and involved producing a portfolio of original compositions and related educational resources. What drew me to this wild and desolate place might best be summed up by Robert Scott when he said, "It is not what we see that inspires awe, but the knowledge of what lies beyond our view."² The attraction of the planet's last great wilderness for me was largely because of the novelty factor and how one translates such a limited palette into sound. This, as I found out, is a challenge for a composer. In this paper I will explore how an environment of sensory deprivation can influence and shape one's work and how a creative artist can find a productive solution to the issue of transcribing such diverse elements as landscape, history, colour (or absence thereof) and natural phenomena (such as wind) into a satisfying musical and poetic form.

The Antarctica experience is a distinctly visual one. The layperson will be all too familiar with photographic images of the continent and it is largely through the visual aspect that the world knows Antarctica. Sounds are limited to skuas, penguins, petrels, the wind and those made by humans. My memories of smell are limited to the diesel from the generators and vehicles at Scott and McMurdo bases and the penguin colony at Cape Royds, neither particularly subtle nor romantic. It is through the imagery of Antarctica that I originally conceived the project but it was this that proved one of the most difficult aesthetic hurdles to overcome when I returned home.

Music and the visual arts have always been intrinsically linked. Terms such as colour, shade, texture, harmony, and tone, for example, illustrate how commonly the two describe their attributes. As Paul Griffiths observes, for Olivier Messiaen the word chromaticism “itself implies some kinship in experience between harmony and colour.”³ There are many creative works in music or painting that make obvious reference to the genres of the other, such as Wassily Kandinsky’s *Die gelbe Klang* (1912), Arnold Schoenberg’s *Die Glückliche Hand* (as well as his own self-portraits and paintings), and Arthur Bliss’ *Colour Symphony* (1921-22). The important relationship between colour and sound is stated clearly by John Gage:

The most familiar branch of synaesthesia is colour-hearing (audition colorée) and the best-known type of colour-hearing is musical. It is easy to see how attractive it has seemed to find points in the continuum of spectral colour analogous to discrete pitches in the continuum of sound whose relationships have been regarded as harmonious in the Western tradition.⁴

In his set designs for the Los Angeles production of *Tristan und Isolde* (1987) and the Chicago production of *Turandot* (1991), David Hockney approached the works with the idea he could “paint with light”⁵ perhaps taking the idea from Richard Wagner himself from Act III of *Tristan und Isolde* when, “his hero sings ‘Wie hor’ich das Licht’ (When I have heard the light).”⁶ Wagner expressed the desire for the orchestration to work “in such a way that colour itself becomes action.”⁷ But how does a composer create a work where the purpose is to represent a lack of colour? Perhaps the problem is more that rather than too little information, such an environment provides a saturation of information, as commented upon by Roland Rood, where “whiteness, or white-black, is the idea of the predominant ever-present medium in which all other colour is sunk.”⁸ It is therefore appropriate to examine how musicians have viewed colour in order to determine how the apparent absence of colour may be treated.

There are many instances where composers have given the keys colours to try to explain their expressive qualities. Ludwig von Beethoven, for instance, once described B minor as being black.⁹ In the preface to the score of *La cite celeste*, Messiaen states that, “the form of this work depends entirely on colours.”¹⁰ Indeed, in this work Messiaen has single chords match the colours of the celestial city’s precious foundation stones. Special instruments have been invented based on the relationship between colour and sound, such as the Rimington colour organ, the clavilux and the clavecin oculaire (ocular clavichord).¹¹ The latter was developed by Louis-Bertrand Castel and had sixty coloured glass windows in the side, which Martin Kemp described as “the elaborate box of colour octaves.”¹² Nikolai Rimsky-Korsakov and Alexander Scriabin drew up a table of colours as they perceived them relating to specific keys and tonality.¹³ For me the absence of chromatic colour suggests white (the colour Rimsky-Korsakov ascribed to C major) and because of this, I was certainly conscious of not ascribing key signatures to any of my Antarctic works. I also believe that a lack of accidentals can infer an emptiness and also a certain brightness which is more in keeping with the Antarctic landscape than any specific colour-key relationship. It is that opaque luminescence which is the basis of Antarctic coloration and of the artistic inspiration I drew upon which I will describe later.

Scriabin’s interest in keys is cited by Griffiths, who states, “For Scriabin, A major was green, E flat steel; F sharp vivid blue.”¹⁴ Scriabin went even further, however, promulgating a wholly synaesthetic approach to art and music, most notably in his symphony *Prometheus*. Gage states that Scriabin’s “early conception of the colour accompaniment to the Prometheus Symphony had been extremely ambitious: he had wished to flood the whole auditorium with coloured lights.”¹⁵

The connection between colour and sound is neither new nor confined to the aesthetic sensibilities of artists. The idea that the association between colour and sound could be proven by the mathematical statement of physical fact was raised by Sir Isaac Newton in his treatise *Opticks* (1704). Newton stated that white light is a blending of all the colours, and, analysing it spectroscopically, identified the seven colours of red, orange, yellow, green, blue, indigo and violet. Newton proceeded to draw comparisons with the seven different notes of the diatonic scale. These analogies were “based on the breadth of the seven colour-bands in the spectrum and the seven string lengths required to produce the scale.”¹⁶

How does one create the sense of awe and space with which one is confronted in Antarctica without being either obvious or trite? What are the challenges the creative artist faces in a place where humans are unwelcome and there is very little stimulation for the senses? How many musical tone-colours are there for white? It hits you in the face the second you step out of the plane—an endless vista where spatial relationships mean little and much of the natural colouration of our world is absent. There are no buildings or trees from which to gain accurate perspective (and, hence, distance) and often it can be difficult (in a relatively small downfall of snow, impossible) to distinguish terra firma from sky. It is an immediate question for the artist of how s/he is to draw inspiration from a place where sensory deprivation is the norm

and life appears in monochrome. That was something for which I was unprepared and became a significant factor in my work on my return. I fully expected Antarctica to fill me artistically, but in a land devoid of vegetation, perspective, colour and even access to the outside world, that process took a long time. Living in a monochrome world of essentially black and white with a tinge of blue certainly pares down your options in the visual field. On many levels the continent takes, it rarely gives. I find a deep resonance when Maurice de Sausmarez states, “colour sensation is differentiated into three essential characteristics: hue, tone and chroma. That white is the absorption and sum of all coloured light.”¹⁷ This dual property of reflecting and absorbing is echoed in my poem *White*:

all white
everywhere white
blue and black
shades of blankness
in a pale palette
of whites

titanium
pearl lustre
cobalt
every one
black on white

a blank canvas
in blanched opaque hues
drained of colour
of life

whites everywhere
white light
the unwritten page
empty words
all white

In my paintings and my music I find myself drawn to the treatment of light by the Post-Impressionist painters Paul Gauguin and Paul Cézanne. Gauguin was very aware of the connections between art and music when he stated in a letter of 1899:

Think of the musical role which colour will henceforth play in modern painting. Colour, which vibrates just like music, is able to attain what is most general and yet most elusive in nature namely its inner force.¹⁸

Yet it is not just because of such direct references linking the two that I find myself drawing comparisons. Both artists relied on light for their realisation of colour and it is the Antarctic light that I have found increasingly attractive. It was precisely this use of light by the painter that attracted Erik Satie and Claude Debussy to Gauguin’s work with his use of rich hues from a tropical climate. By contrast Cézanne often creates a cooler mood, leaving the canvas showing through the pigment and some areas barely covered. One might also cite the subconscious spontaneity and loosening of cognate relationships between shape and colour in the works of artists like Wassily Kandinsky, Paul Klee and Jean Miro, although it is Cézanne who influenced György Ligeti in the latter’s second string quartet, for Cézanne’s demonstration of how colour can replace contour.¹⁹ My response then to the Antarctic landscape in the scores I have since devised was to focus more on contour than colour, shape and form, rather than the coloration of chords.

Figure 1 Patrick Shepherd, *Katabatic* (2004)

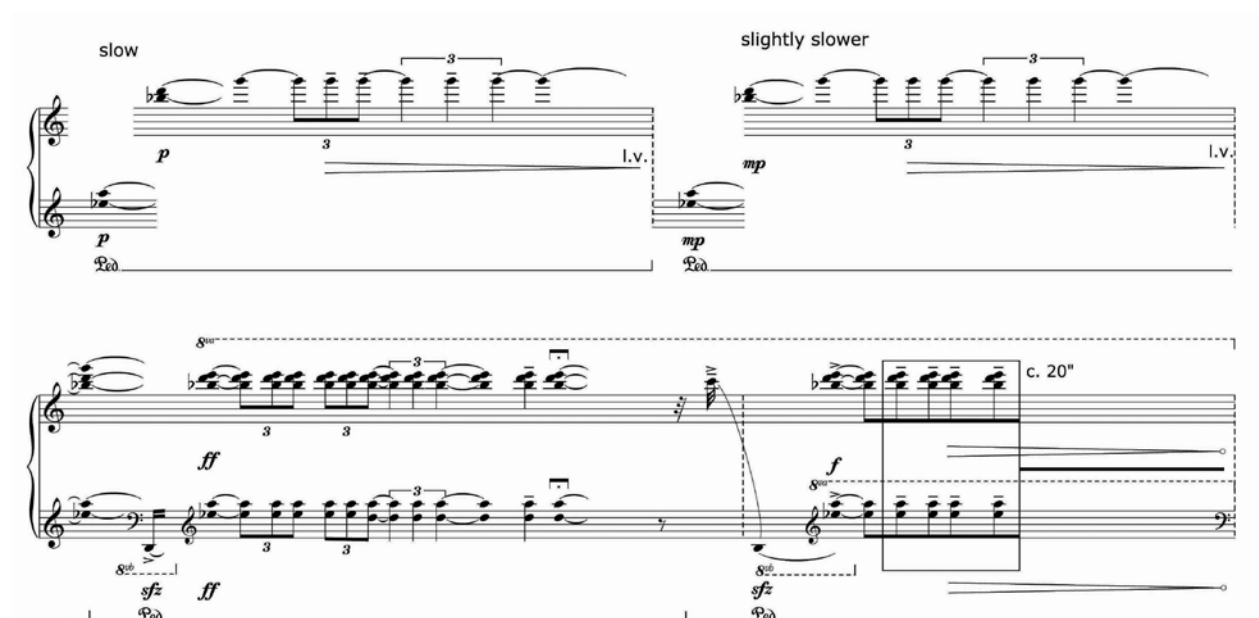
Katabatic (Figure 1) is a brief musical interpretation that does precisely this. When writing it I was principally concerned with the horizontal linear movement of parts rather than the vertical ‘colour’ of harmony. Written as a 30 second microscore for the Auckland-based ensemble 175East it served as a sketch, requiring little structural consideration beyond depicting a quick blast of icy air using wind instruments, rapid trills, flutter tongues and key rattles. It is, because of its length (which was a stipulation by the ensemble for a programme featuring a number of such microscores), extremely concise and somewhat underdeveloped, but captures the rawness and feel of a katabatic wind, the fiercely strong winds that sweep down the sides of the Antarctic mountains across the icy plains. It was written in a short period of time and originally used graphic notation with pencil and paper, which was immediately transferred across to computer. It is a catalogue of effects and, as such, not written easily in the ‘building block’ way I usually write when using the computer. I needed to write freehand to achieve what I really wanted and it was at this point I began to realize the limitations that composing at a computer presents. Consequently, I have reverted more and more to sketching ideas on paper first, and then transferring them across to the computer when the ideas are virtually fully formed. I find that writing with a pencil affords a freedom of stroke that piecemeal construction on a monitor does not, and with vistas as broad as those in Antarctica I have come to value the broad sweep approach.

A key strategy in translating the sights and sounds of Antarctica into music is a paring down and simplicity of language which I feel is neither naïve nor eclectic. I have undertaken much extra-musical research, material that contributes to the work but is not present in the music itself. Like the continent itself, in some of the more still sections of music, the surface activity belies the depths beneath. This ‘less-notes-per-square-inch’ is like a haiku, encapsulating deep thought in fewer and perhaps more enigmatic words. I moved from working with complex textures to now using more simple ones, adopting a more minimalist style, as in *Cryosphere* (Figure 2).

This page of the musical score is for a symphony, featuring a variety of instruments. The instruments listed on the left are: picc., fl. I, fl. II, ob. I, ob. II, cl. I, cl. II, b. cl., bsn I, bsn II, hn I & III, hn II & IV, tpt I, tpt II, tpt III, tbn., b. tbn., tuba, tub. b., vib., hp, vln I, vln II, vla, vc., and d.b. The score includes dynamic markings such as *mf*, *mp*, *p*, and *pp*. A rehearsal mark [56] is present at the top left. The music is written in 4/4 time and features complex rhythmic patterns and melodic lines across the various instruments.

Meditation 2 (Figure 3) is a through-composed response to my sitting on a rock gazing out across the Ross Sea ice shelf for hours on end. It truly captures that sense of spaciousness with wide register gaps and improvisatory notation. De Sausamarez quotes Cézanne, who said of himself, “I proceed to a logical development of what I see in nature,”²⁰ and it is this very nature that I attempted to capture in the cold, harmonic colours, the harmony either jarringly tight in the upper register or reliant on the translucent quality of fourths and fifths.

Figure 3 Patrick Shepherd, *Meditation 2* (2005)



Another dimension of the study of Antarctica is the historical context, which pervades much of the literature on Antarctica, particularly the “Heroic Age” of Antarctic exploration. Early last century the efforts of explorers like Robert Scott, Ernest Shackleton and Douglas Mawson established Antarctica as one of the last great wildernesses to be conquered by mankind. For New Zealanders that historical link took another tragic turn when Air New Zealand Flight 901 crashed into Mount Erebus on 28 November 1979, killing all 257 people aboard. During my visit to Antarctica, a door from the plane was found and the emotional ripple went right through Scott and McMurdo bases. Tragedy is never far away in Antarctica and I was reminded of this when I played a selection of my pieces to a group of school children and one child very perceptively said, “They’re not very happy, are they?”

The huts of Scott and Shackleton have huge historical significance and both have found their way into my work, both figuratively and in the abstract. It was Shackleton who summed it up succinctly when he talked of polar exploration as being not an outward journey but one within oneself.²¹ This was key to my experience, both in music and visual art. This internal/external dialogue was behind my painting *Anthrax Alley, Terra Nova Hut*, a bright blue light dominating a dark, dingy corner of Scott’s hut which, incidentally, contains anthrax thought to have been brought down to Antarctica by one of the ponies. The intense colour and light throws the interior into starker relief and the eye is drawn to the intense blue. Nothing is discernable through the window, and one is merely aware of its intensity and that it places you in the interior while a bright exterior awaits outside. The blue that pervades the light and landscape of Antarctica recalls the statement of art critic Johannes Itten that:

blue is a power like that of nature in winter, when all germination and growth is hidden in darkness and silence. Blue is always shadowy, and tends in its greatest glory to darkness. It is an intangible nothing, and yet present as the transparent atmosphere.²²

It is not just the obvious analogy with a wintry scene that draws me to Itten. Much of Itten’s discussions on colour theory are related directly to the work of the Impressionists and Post-Impressionists and how their treatment of light creates a sense of space that has helped me address the assimilation of the Antarctic landscape into my work.

Figure 4 Patrick Shepherd, *Three Antarctic Sketches* (2005)

The musical score for *Three Antarctic Sketches* (2005) by Patrick Shepherd is written for violin and violoncello. It consists of three systems of music. The first system (measures 1-8) begins with a tempo marking of quarter note = 108. The second system (measures 9-16) and third system (measures 17-24) continue the piece. The score includes various dynamics (pp, mf, pp, mp, p, f) and articulations (pizz., arco). The key signature has one flat (B-flat), and the time signature is 3/4.

My poem *Away Across the Ice, the Boys Come Home* echoes what many visitors to the historic huts have experienced, that at any moment the young men will reappear from the white vastness to reclaim the socks hanging from the empty beds and break open the cans of unopened food. The poem encapsulates this unresolved state:

away across the ice, the boys come home
calling to one another
across the great empty space
the years dropping away
melting in the Antarctic sun

above the skua calls
amid the moaning sea ice
the aggressive cold breath
wheezing from Erebus' flanks

the boys laugh
their heads thrown back
forever coming home

I used this self-penned text as the basis for the second of my *Three Antarctic Sketches* for violin and 'cello (Figure 4) which shares the same title. I mirrored Messiaen's *Danse de la fureur, pour les sept trompettes* from *Quartet for the End of Time*, with both instruments playing in unison in meandering, uneven phrases. The melody is modal, the character reminiscent of quick plainchant and this has the effect of eliciting the sense of unease which I felt at being alone in this hut full of memories. Offsetting this is the raw brutality of *Skua Dance* (Figure 5), the third movement of the work, which mimics the belligerent characteristics of these large, coarse sea birds which hover over the penguin colony waiting for the chance to strike, plucking a chick away from an unsuspecting parent. The skuas' aggression is displayed frequently towards one another and their prey, the penguins. Thus, in the music, the two instruments work against each other, struggling for supremacy. This is as much a visual piece as an aural one, absolutely programmatic rather than aesthetic, with both players visibly using vigorous bowing and pizzicato and strongly accentuated off-beats to depict the belligerent birds circling and fighting.

Figure 5 Patrick Shepherd, *Skua Dance* (2005)

A project on Antarctica would not be complete without penguins. Any discussion about Antarctica, be it formal or informal, usually involves this most endearing of birds. I spent several days at Cape Royds where a large colony of over 30,000 birds bark their staccato calls every minute of the day, which, by 3 a.m., becomes a lot less endearing. It is an enlightening experience being amongst these creatures, their cumbersome appearance on land belying their grace, speed and agility in the water. They are incredibly social creatures and watching their community was a microcosm of our world—it is all there in great abundance: the perpetual struggle involving life, sex and death. In *Adeliesong* for two clarinets, I use the additive rhythms of the Adelie penguins calling to one another as the basis of the work. I also instruct the performers to face each other, in much the same way as the birds do. The key-taps and breath noises depict the scuffling of their claws. I extended these additive canonic rhythms in *Fanfare for a Frozen Land*, utilising the

Figure 6 Patrick Shepherd, *Penguin Carcass* (2006)



larger orchestral palette to broaden this imitative interplay further on a fuller scale.

In the acrylic *Penguin Carcass* (Figure 6), my response was very Francis Bacon-ish, with raw reds and umbers forming a central block, with a further harsh juxtaposition of the white cruciform wings against the black rock. Expressionist though this might at first appear, it is fairly accurate of how these stressed and strafed carcasses do appear—not much was added by the artist in this painting. Antarctica is littered with the remnants of seals and penguins because nothing really decays there in the traditional sense of the word. In the Dry Valleys, for instance, it has not rained in more than 30,000 years, making it drier than the Sahara Desert and almost impossible to carbon-date the remains of the animals because they erode rather than rot.

As I have alluded to earlier, the whole experience of the trip had such a profound effect that it was difficult for me to write anything meaningful for many months. The sketches for *Cryosphere* stagnated throughout 2004 until I faced a deadline for completion (the 2006 Lilburn Prize in which it was subsequently a finalist). I had written the slow section fairly soon after my return from Antarctica

but could develop the larger work no further than a series of tableaux. The solution came from a very unusual source, largely helped by the writings of Dr Stephen Pyne and Professor David Bohm, both of whom have written extensively on the beneficial connections between the arts and science. Science was a huge help, explaining Antarctica in terms other than feelings and colours. From that I was able to consider form, structure and an analytical approach that was both stimulating and more true to the essence of the experience of being in Antarctica. I was able to move away from an instinctive, aesthetic reaction and focus more on scientific ideas and concepts, developing works based on microviews rather than majestic vistas. In *Cryosphere* (Figure 2), I used the idea of a Kovac's drill lifting layers of ice out of the ice shelf and layered the orchestration accordingly, creating strata of shifting sounds. This relationship between science and art is also something de Saumarez remarks on when he states, "Cézanne in the nineteenth century said, 'Art is a construction parallel to Nature'; some twentieth-century artists have implied that it may also be a construction parallel to science."²³

It is through science and the study of a distant, frozen, inhospitable land that my creativity has paradoxically moved into a very fertile stage. It was not, as I first thought, the wide, majestic vistas that would fuel my compositions but the play of light and the effects of a limited colour palette. It is perhaps because of the wide horizons that I have been thinking horizontally in a linear fashion rather than vertically. The vastness of the panorama is also the reason for focusing on the small details close at hand.

In conclusion, I feel the adage less is more best describes my Antarctic experience and the ways in which it has translated into my musical language and compositional style. Removing stimuli has paradoxically stimulated ideas and embarking on what I thought was an aesthetic journey has turned into one fuelled by science. My attempts to depict harmonic colour have in fact resulted in a certain musical 'colourlessness' and my primary focus has shifted from purely music to a more synaesthetic approach. Most people who visit Antarctica say it is life changing. In artistic terms, I can certainly attest to that.

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Notes

1. See anon., "Artists to Antarctica," on the *Antarctica New Zealand Website* (Christchurch: New Zealand) <<http://www.antarcticanz.govt.nz/artists/>>.
2. Pyne, p. 117.
3. Griffiths, p. 203.
4. Gage, *Colour and Meaning*, p. 141.
5. Riley, pp. 294-296.
6. Ibid., p. 293.
7. Ibid., p. 293.
8. Rood, p. 101.
9. Scholes, p. 203.
10. Griffiths, p. 203.
11. Scholes, pp. 207-209.
12. Kemp, pp. 289-290
13. Scholes, p. 204.
14. Griffiths, p. 205.
15. Gage, *Colour and Culture*, p. 243.
16. Scholes, p. 205.
17. De Sausmarez, p. 80.
18. Ibid., p. 82.
19. Steinitz, p. 47.
20. De Sausamarez, p. 65.
21. Morris, p. 84.
22. Itten, p. 88.
23. De Sausmarez, p. 65.